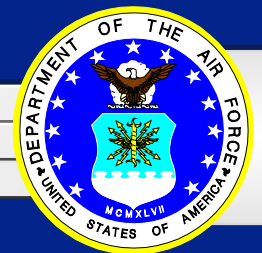
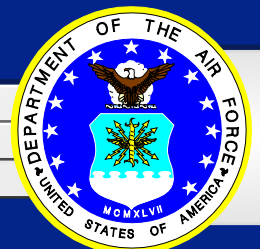


Operational Risk Management (ORM)



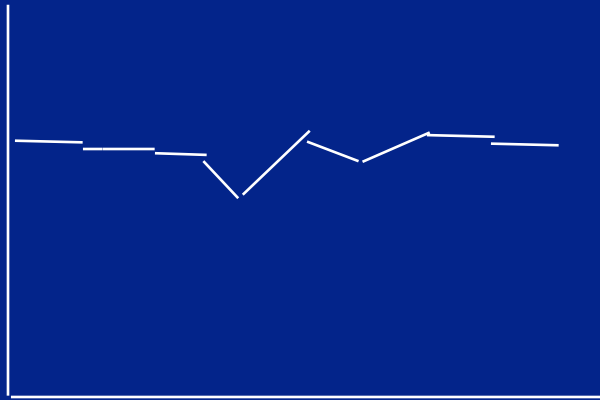
OVERVIEW

- ✂ **Why ORM?**
- ✂ **What is ORM - The Essentials**
- ✂ **The Integration Imperative**
- ✂ **USAF ORM Strategy**
- ✂ **ORM Leadership Opportunity**
- ✂ **ORM Applied**

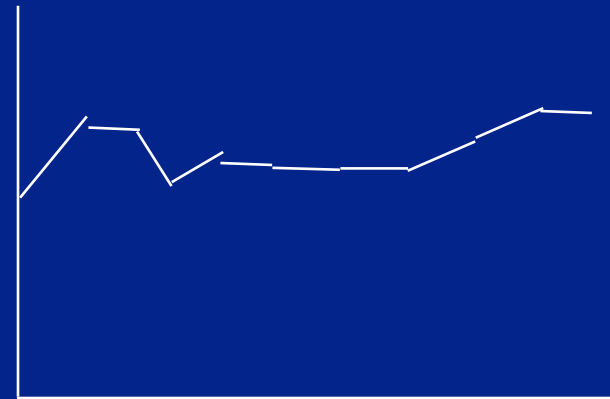


Why ORM?

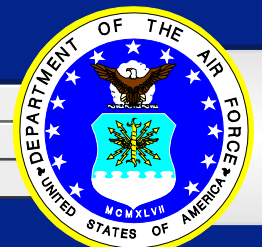
USAF CLASS A FLIGHT
86-96



USAF CLASS A GROUND
86-96



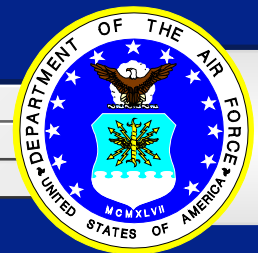
**NO STATISTICALLY SIGNIFICANT CHANGE
FOR AT LEAST 7 YEARS *“PLATEAUED”***



MISHAP RATE VS ANNUAL COST

CLASS A ONLY

(Why we need it)

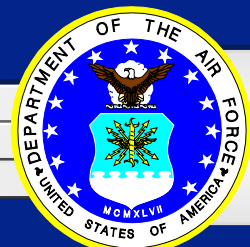


Why ORM?

To Ensure Necessary Risks are Taken

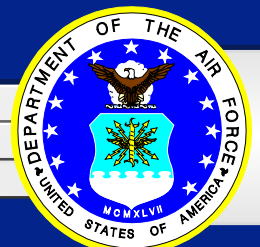
ORM:

- ✂ **An important tool for training realism**
- ✂ **Significant potential to expand capabilities**
- ✂ **Assures necessary risk taking to enhance superiority**

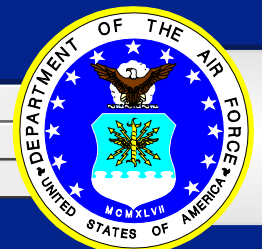
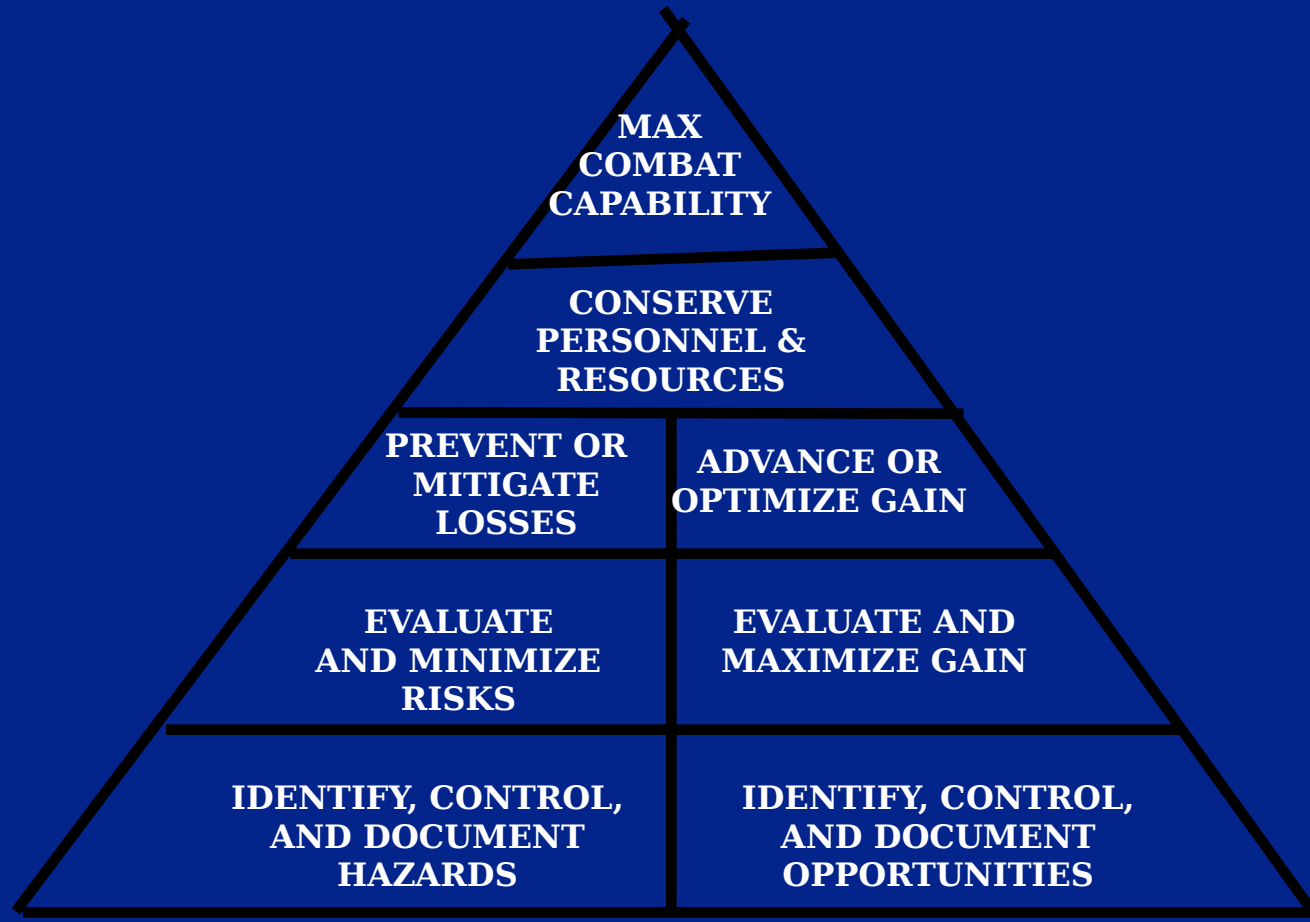


What is Operational Risk Management?

- ✂ **Natural evolution from traditional risk management**
- ✂ **Systematic decision-making tool that balances risk cost & benefits**

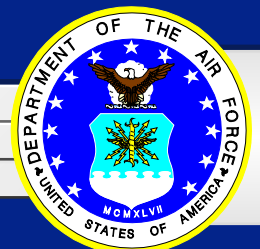


GOALS



4 KEY ORM PRINCIPLES

- 1 - Accept no unnecessary risks.**
- 2 - Make risk decisions at the appropriate level.**
- 3 - Accept risks when benefits outweigh costs.**
- 4 - Integrate ORM into doctrine and planning at all levels.**

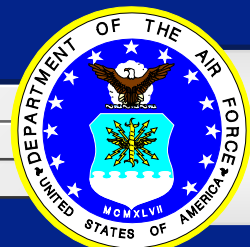


1 - ACCEPT NO UNNECESSARY RISKS

***BUT.... NOBODY TAKES
“UNNECESSARY” RISKS?***

***If all the hazards that could have
been detected have not been
detected then unnecessary risks
are being accepted.***

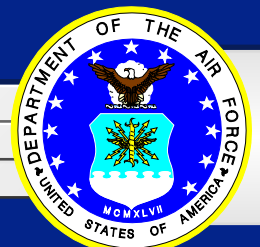
The single greatest advantage of ORM over traditional risk management is the consistent detection of more hazards.



2 - MAKE RISK DECISIONS AT THE APPROPRIATE LEVEL

Factors below become basis of a decision-making system to guide leaders

- ✂ **Who will answer in the event of a mishap?**
- ✂ **Who is the senior person at the scene?**
- ✂ **Who possesses best insight into the full benefits and costs of a risk?**
- ✂ **Who has the resources to mitigate the risk?**
- ✂ **What level makes the most operational sense?**
- ✂ **What level makes these types of decisions in other activities?**
- ✂ **Who will have to make this decision in combat operations?**

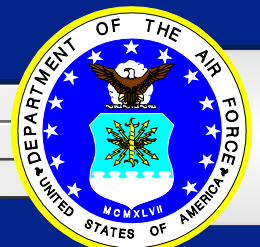


3 - Accept risks when benefits outweigh costs.

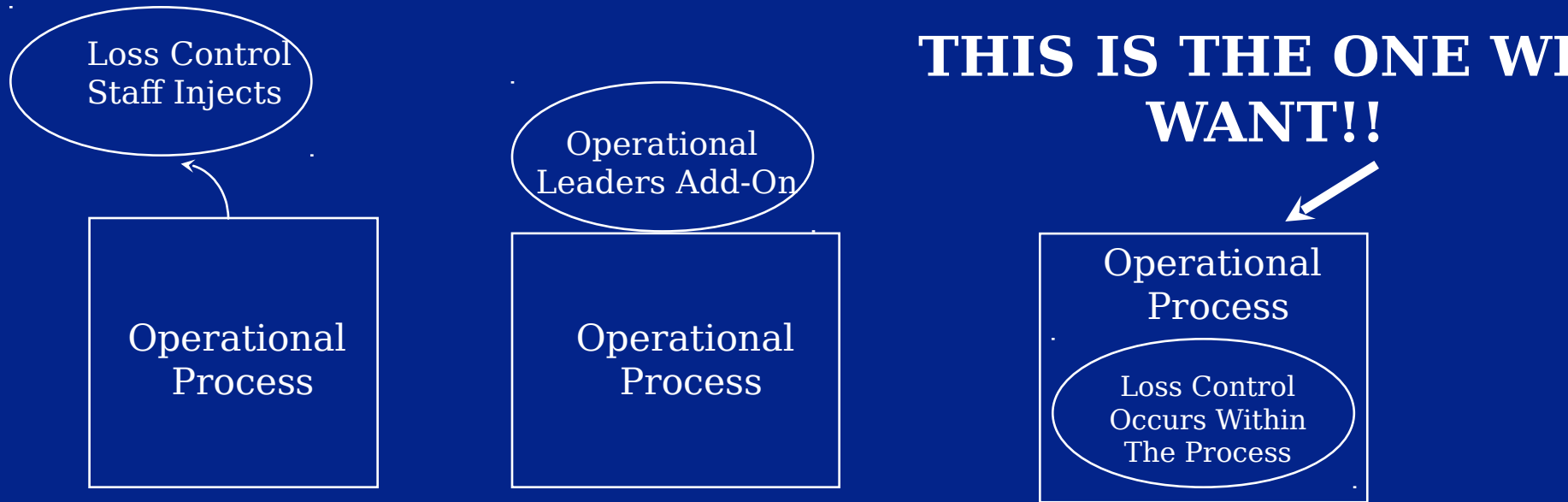
WHAT HAPPENS WHEN AN ORGANIZATION STOPS TAKING RISKS?

WEBSTER: "BUREAUCRACY: A system of administration characterized by lack of initiative and flexibility, by inattention to human needs or public opinion, and by a tendency to defer decisions to superiors or to impede action with red tape."

MAINTAINING A BOLD, RISK-TAKING ORGANIZATION IS ALWAYS A CHALLENGE IN PEACETIME. ORM HELPS.



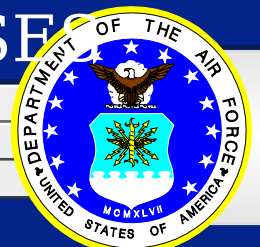
DOCTRINE AND PLANNING AT ALL LEVELS.



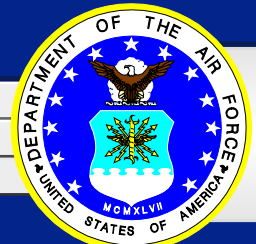
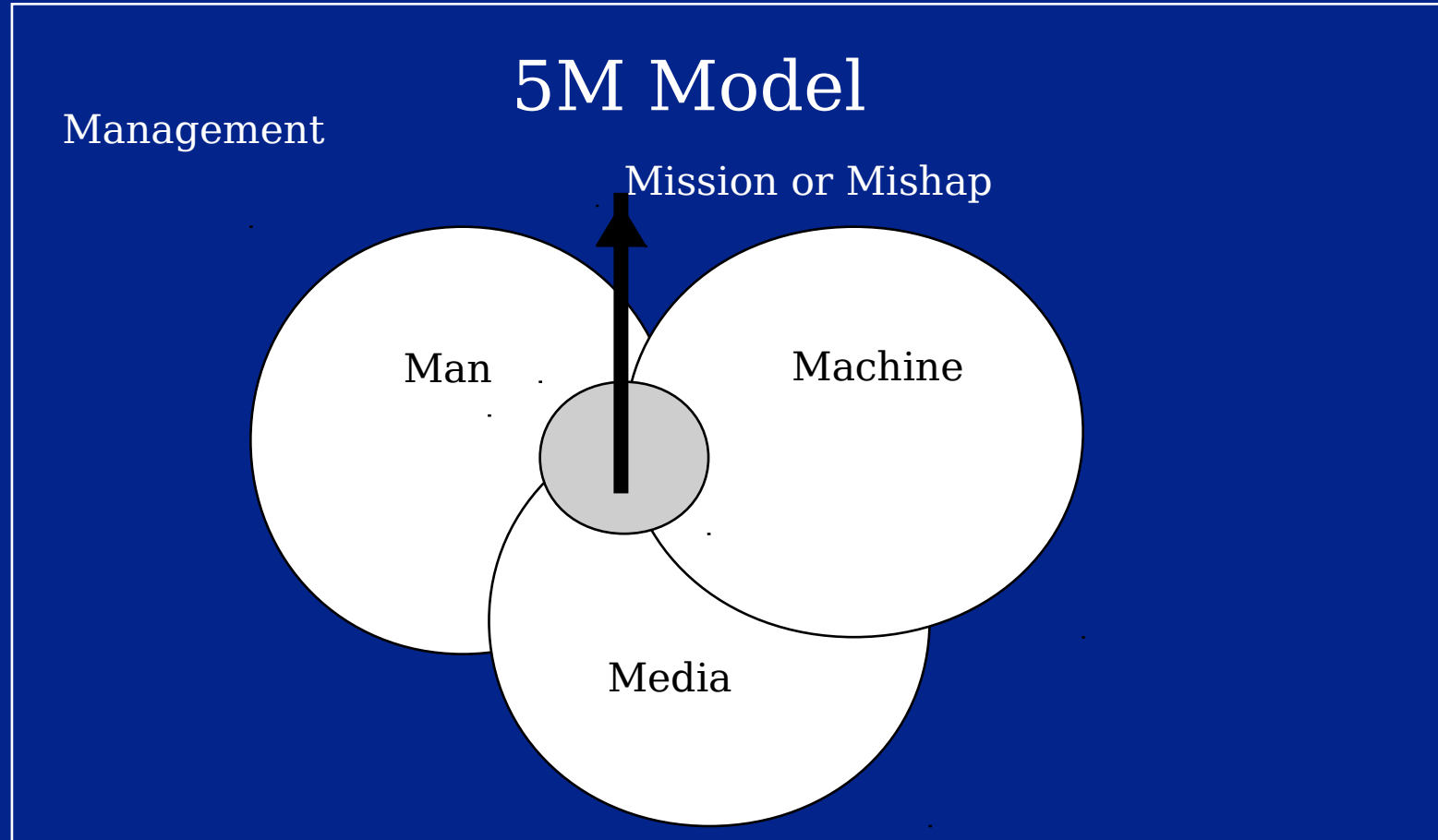
WHAT IS AN “OPERATIONAL PROCESS”?



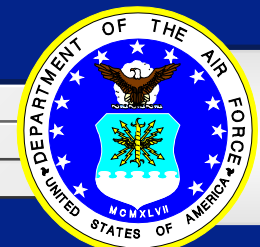
AND ALL THEIR SUBPROCESSES



ORM IS BASED ON SYSTEMS MANAGEMENT CONCEPTS



THE ORM 6-STEP PROCESS

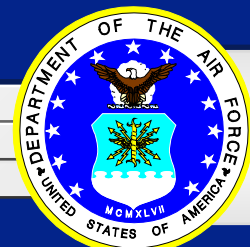


Step 1 - Identify the Hazard



Process: Emphasize hazard ID tools. Adds rigor and early detection.

Output: Significant (50%+) improvement in the detection of hazards.



7 Primary Hazard ID Tools

**BROAD RANGE OF
APPLICATION AT ANY
LEVEL**

Operations Analysis/Flow Diagram

Preliminary Hazard Analysis

What If

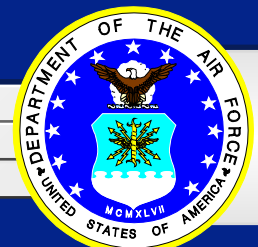
Scenario

Logic Diagrams

Change Analysis

Cause and Effect

**AFPAM 91-215 -- the “Tool
Box”**

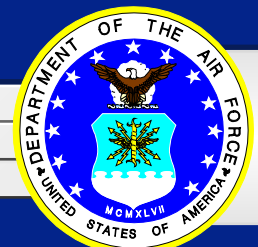


Advanced Hazard ID Tools

- ✂ Specialized tools accomplish specific ORM objectives.

Map analysis, interface analysis, mission protection tools, training realism, opportunity assessment

- ✂ Advanced tools are used by specialists and professionals to add depth to ORM applications

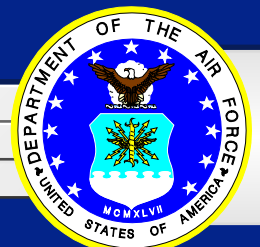


EXAMPLE:

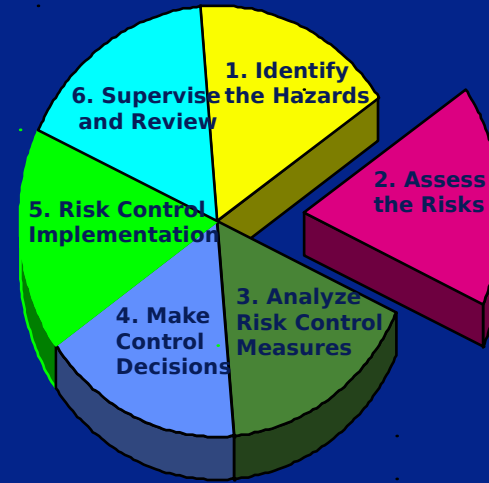
THE DRIVE TO WORK

WHAT IF ANALYSIS

- ✂-What if the car catches fire.
- ✂-What if a carjack is attempted.
- ✂-What if I have to take an unknown detour.
- ✂-What if I run out of gas.
- ✂-What if another car rear ends me.



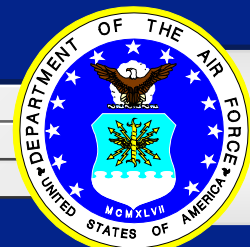
Step 2 - Assess the Risk



Process: All hazards evaluated for total impact on mission or activity. Root causes determined and risk levels assigned (EH, H, M, L)

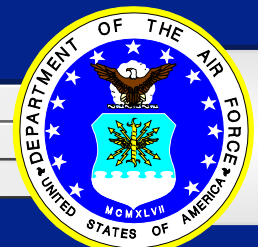
Output: Personnel throughout the organization know the priority risk issues of the

command and of their function.



THE ASSESSMENT TOOLS ADD OBJECTIVITY TO THE EVALUATION OF RISK

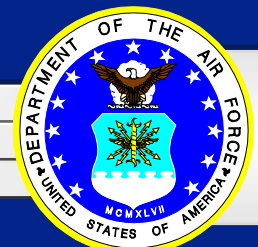
- ✂ **Risk assessment matrix:** Requires specific evaluations of severity, probability, and when necessary, exposure
- ✂ **Totem pole:** Induces the prioritization of risk issues across functions and across the organization



THE RISK ASSESSMENT MATRIX - KEY

TOOL FOR RISK ASSESSMENT

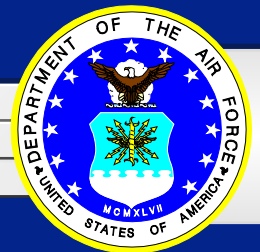
			Probability				
			FrequentLikely OccasionalSeldom Unlikely				
			A	B	C	D	E
S E V E R I T Y	Catastrophic	I	Extremely High				
	Critical	II	High	High			
	Moderate	III		Medium			
	Negligible	IV		Low			
			Risk Levels				



EXAMPLE:

THE DRIVE TO WORK

- ME** ✂-What if the car catches fire.
- HIGH** ✂-What if a carjack is attempted.
- LOW** ✂-What if I have to take an unknown
ME detour.
- ME** ✂-What if I run out of gas.
- D** ✂-What if another car rear ends me.

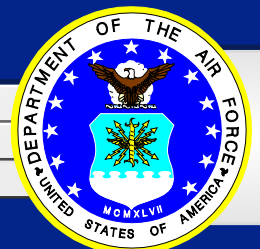


Risk Control Measures



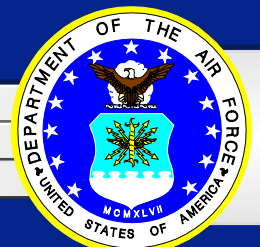
Process: Comprehensive risk control options are developed for risks based on a worst-first basis.

Output: A full range of cost effective, mission supportive, risk controls for the consideration of the decisionmaker.



Option Tools Add Scope & Depth

- ✂ Basic or “macro” risk control options: **Reject, Avoid, Delay, Transfer, Spread, Accept, Compensate, Reduce**
- ✂ Risk control options matrix: 46 specific “reduce-focused” control options - applicable at up to four levels in the organization



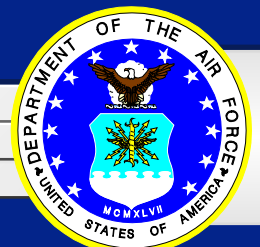
EXAMPLE:

THE DRIVE TO WORK

What if the car catches fire **MEDIUM**

Macro options:

- ✂-Transfer - Insurance
- ✂-Reduce (use Control Options Matrix) -
 - ✂ Engineer gas tank
 - ✂ Drive defensively
 - ✂ Focused maintenance
 - ✂ Emergency response plan & equipment

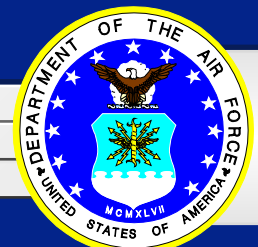


Step 4 - Make Control Decisions



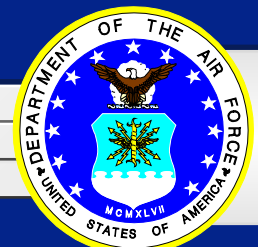
Process: A decision-making system gets risk decisions to the right person, at the right time, with the right support.

Output: Personnel know their decision-making authority and limitations and take necessary risks.



Decision-making Tools

- ✂ Decision-making systems get the decision to the right person, at the right time, with the right support
- ✂ Basic cost benefit and return on investment analysis assure maximum benefit for the risk control \$
- ✂ Decision-making matrices and other modern decision-making tools improve decision quality
- ✂ The leader question list induces better staff inputs



ESTABLISHING A DECISION MAKING GUIDELINE

EXAMPLE

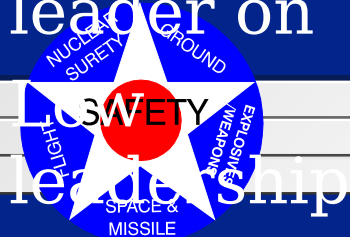
RISK LEVEL

Extremely High
specifically
designee

High

designee

Medium
leader on



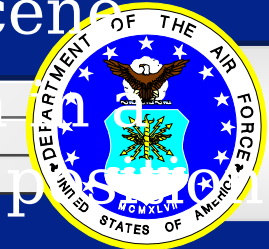
DECISION LEVEL

Wing Commander or
authorized

Group Commander or
specifically authorized

Flight leader, or senior
the scene

Any person



EXAMPLE:

THE DRIVE TO WORK

What if the car catches fire **MEDIUM**

Who decides: Vehicle owner(s)

Control: Emergency response plan & equipment

Decision:

\$500 - Deductible

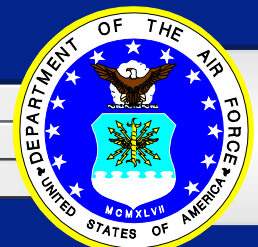
Rate increase?

Car down-time

Repair/Replacement hassle

Cost of control

\$15 fire extinguisher

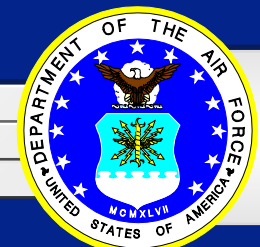


Step 5 - Risk Control Implementation



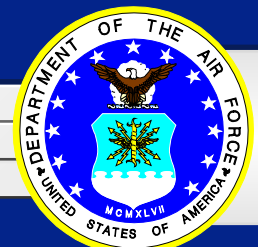
Process: Leaders lead, operators are involved, all are accountable.

Output: ORM initiatives always have positive mission impact.



ORM Implementation Tools & Guidelines Help Controls Click with Operators

- ✂ The involvement continuum guides the high degree of operator input to ORM actions
- ✂ The leader involvement actions list and the leader opportunity job aid help assure effective leader influence
- ✂ The motivation model makes application of modern behavior management techniques easier



EXAMPLE:

THE DRIVE TO WORK

What if the car catches fire **MEDIUM**

✂-Transfer - Insurance OPR: Dad

✂-Reduce -

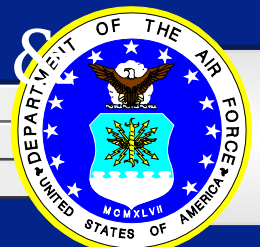
✂-Engineer gas tank OPR: Ford

✂-Drive defensively OPR:
Driver

✂-Focused maintenance OPR: Dad

✂-Emergency response plan &
equipment OPR: Team Mom &

Dad

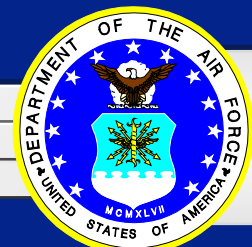


Step 6 - Supervise and Review



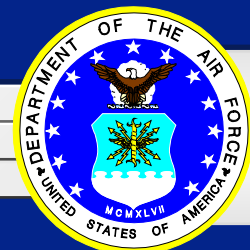
Process: Progress measured through increased mission effectiveness, mishap results and direct indicators of risk.

Output: ORM performance status determined real time.



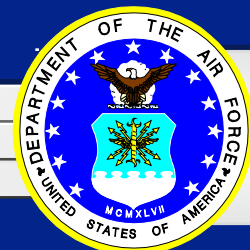
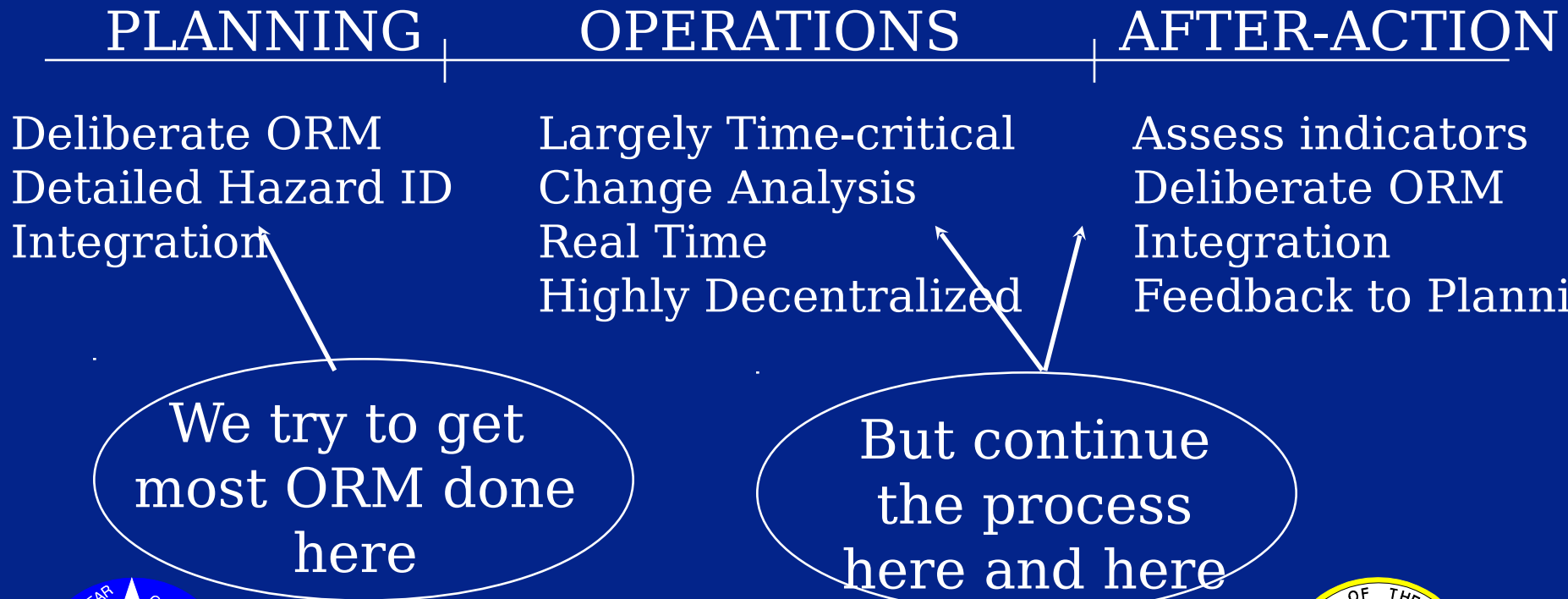
Review and Feedback Procedures Measure & Leverage ORM Results

- ✂ **Eliminate invalid statistical uses of mishap rates and numbers**
- ✂ **Refocus measurement on direct measures of risk (critical behaviors, knowledge, conditions, etc.)**
- ✂ **Radically improve the effectiveness of feedback systems through modern data and communications systems**



PROCESS

THE RISK MANAGEMENT CONTINUUM



USING THE 6-STEP PROCESS LEVELS OF EFFORT

TIME CRITICAL

DELIBERATE

STRATEGIC

Little
Time
Resources
Risk

Lot of
Time
Resources
Risk

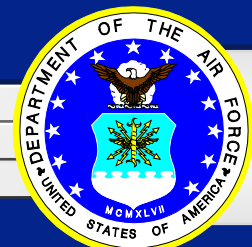


SELECTED
PRIMARY

PRIMARY

SPECIALIZED

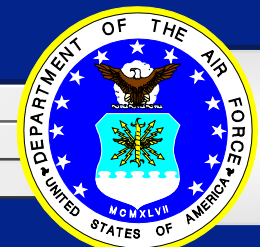
ADVANCED



Integrating the ORM Process

Overview

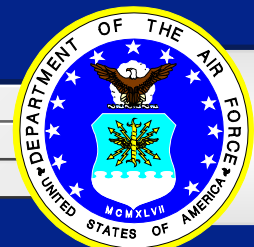
- ✂ Why integration is critical?
- ✂ 12 Strategies for ORM integration.
- ✂ The importance of



WHY INTEGRATION IS CRITICAL?

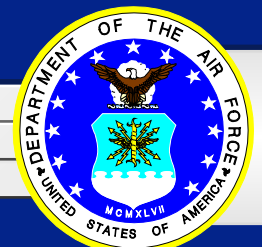
Integration:

- ✂ **Forces balancing of loss control and other mission needs**
- ✂ **Captures more of the knowledge and experience of large numbers of operators**
- ✂ **Reduces the number and diversity of references needed to do the job right**
- ✂ **Eliminates redundancy and gaps between loss control functions**
- ✂ **Strengthens accountability**
- ✂ **Reduces costs and workloads (in plans, materiel development cycles, etc.)**



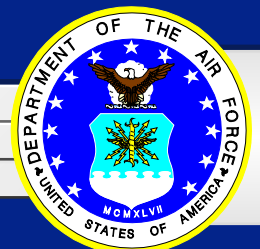
THE TWELVE STRATEGIES FOR PROGRAM INTEGRATION

- ☐ **Accountability**
- ☐ **Teaming**
- ☐ **Partnership**
- ☐ **Integrate in Training**
- ☐ **Risk Decision Points**
- ☐ **Organization & Policy Structure**
- ☐ **Employee Activities**
- ☐ **Process Integration**
- ☐ **Direct Culture Change**
- ☐ **Gain a Champion**
- ☐ **Integrate in Strategic Planning**
- ☐ **Integrate into Indicators**



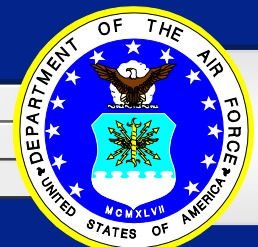
THE IMPORTANCE OF PACE

- ✂ **Don't use the shotgun**
- ✂ **Don't get out in front of the organization - too far**
- ✂ **Don't "inspect-in" ORM**
- ✂ **Do focus on "targets"**
- ✂ **Do expect crawl, walk, run**
- ✂ **Patience, patience, patience**



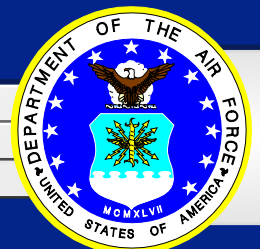
USAF ORM MATURATION

- **USAF Approach**
- **Background**
- **Current & On-Going Status**
- **Initiatives**



USAF APPROACH

- ✂ **Top-down leader backing**
- ✂ **Decentralized implementation**
- ✂ **Moderate implementation tempo**
- ✂ **AFSC support base**
- ✂ **Safety lead role for cross-functional implementation**

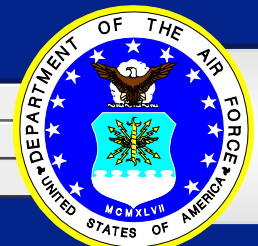


BACKGROUND

Policy and Leadership

Initiatives

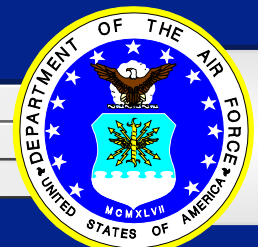
- Extensive benchmarking of risk management - public & private sector
- CSAF Approved ORM Implementation 2 Sep 96
- AFI 91-213, Operational Risk Management Program (ORM) published, Nov 96
- Implementation Plan
 - CSAF Memo, Jul 97, Distributed
 - **1 Oct 98 Target Date**
- CSAF Video released Jul 97
- AFPAM 91-214, Operational Risk Management Implementation and Execution published, Sep 97 (AFPAM 91-215 will supersede)
- CSAF "General Ryan Sends" - 2 Dec 97



BACKGROUND

Education and Training Initiatives

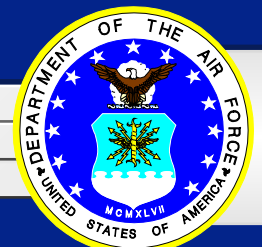
- ✧ Executive Level Intro (CSAF, SECAF, CORONA) Complete
- ✧ AETC Working Intro into Operations Training & PME
- ✧ Computer Based Training (CBT) Fielded
- ✧ ORM Brief by AF/SE at Wing/Grp CC Courses
- ✧ AFSC Web Site Established
- ✧ ORM Included in AFSC Courses (COS, FSO, & Board President)
- ✧ Phase I ORM Course - Trained Initial Cadre of Advisors (No Longer Scheduled)
- ✧ Applications Course - Initiated
- ✧ Executive Level Familiarization - Initiated



BACKGROUND

Management Structure

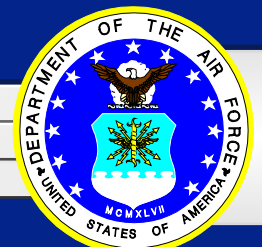
- **AFSC Leadership and Support**
- **Steering & Working Group Bodies**
 - **USAF ORM Steering Committee**
 - **AF Chief of Safety & MAJCOM/ANGRC/USAFA SEs**
 - **Expanded to SAF/AQ/MI & AF/SG/IL/SF/XO/XP**
 - **USAF ORM Working Group**
 - **MAJCOM/ANGRC/USAFA**



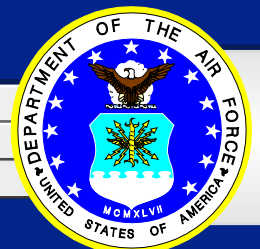
ORM Initiatives

Things We're Working

- ✂ **AF Pamphlet 91-215, "ORM Guidelines and Tools"**
- ✂ **CSAF AFNEWS release**
- ✂ **Applications CBT**
- ✂ **Improved USAF Mishap Database**
- ✂ **Risk Information Management System**
- ✂ **AF/SE team with respective functional staffs to formulate functional community templates to aid & enhance action level efforts**
- ✂ **Explore Joint Initiatives**
- ✂ **Doctrine Integration**



***The leader's role will
be a decisive factor
in the success or
failure of ORM***



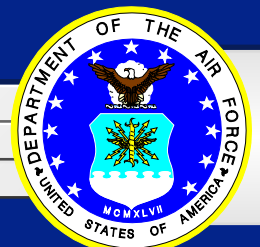
ORM Leadership Opportunities

1. Commit to Breakthrough Improvement

Objectives: Put improvement of risk performance (control-opportunity) on a competitive level with other important mission concerns.

2. Set Goals & Objectives

Objectives: Establish periodic ORM performance and programmatic goals.



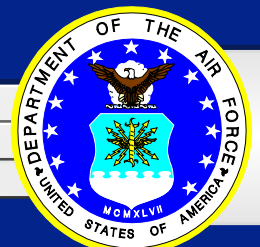
ORM Leadership Opportunities

3. Set a Personal Example

Objectives: To assure credibility of the ORM process through personal behavior.

4. Build an Aggressive Opportunity Mindset in the Organization

Objectives: Create an organization as conscious of the opportunity aspects of ORM as it is the risk reduction



ORM Leadership Opportunities

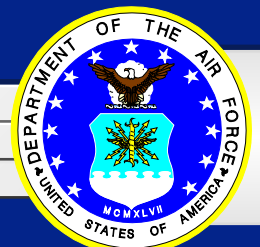
5. Induce Loss Control

Community Functional Integration

Objectives: Build increasing cooperation and integration of the loss control community

6. Establish an ORM Management Structure

Objectives: Provide the necessary leadership and staff resources to adequately guide the ORM process



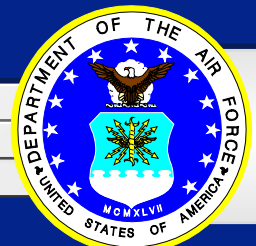
ORM Leadership Opportunities

7. Resource ORM Activities

Objectives: Allocate resources to ORM (control- opportunity) at a level it can competitively justify

8. Heat Shield Subordinates

Objectives: Protect subordinates who have taken prudent, mission supportive risks, but experienced severe losses, from negative consequences.



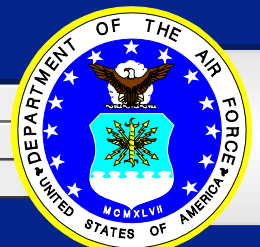
ORM Leadership Opportunities

9. Detect & Correct Gambling

Objectives: Develop an organization in which risk “gambling” is deterred even when the gambler “wins”.

10. Use the Power of Question

Objectives: Use pointed ORM questions to induce ORM activity and culture change.



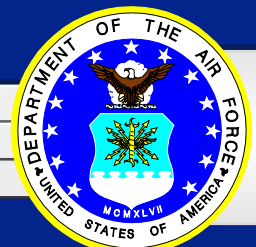
ORM Leadership Opportunities

11. Regularly Monitor ORM Progress

Objectives: Periodically assess a set of data that effectively monitors organization ORM status

12. Exploit the ORM Value of Major Mishap Reviews

Objectives: Consistently induce consideration of the ORM implications of mishaps

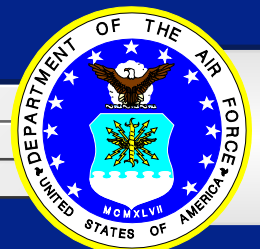


Questions?



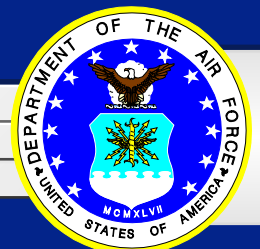
ORM Applied

ORM in the Desert



THE SITUATION

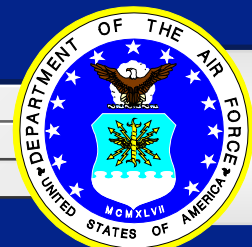
- ✂ **4404th conducting intensive real world mission**
- ✂ **Directed to radically speed up move to desert site**
- ✂ **Directed to sustain full opstempo during the move**



CONDUCTS THE MOVE USING TRADITIONAL SAFETY PROCEDURES

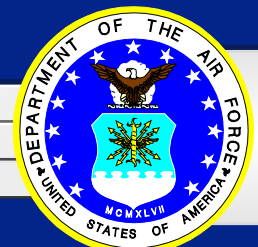
RESULT

- ✂ **Several mishaps and many incidents**
- ✂ **Perception that the safest part of any flight is over Iraq**
- ✂ **Increasing adverse impact on morale**
- ✂ **Increasing expectations of a really catastrophic incident**



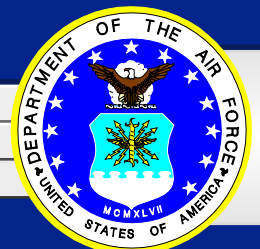
THE COMMANDER ACTS:

- ✂ **Decides to reject/delay (knock it off call) risk (2 days)**
- ✂ **Decides to apply operational risk management to the situation**
- ✂ **Obtains higher HQ authority for 2 day partial standdown**



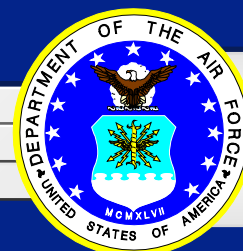
2-Day, 5-Step Process

- ✂ **Identify Hazards**
- ✂ **Assess Hazards**
- ✂ **Develop Controls & Make Risk Acceptance Decisions**
- ✂ **Implement Controls**
- ✂ **Supervise**



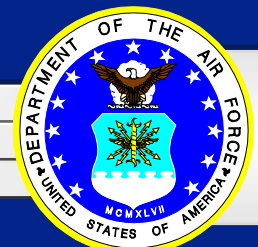
Step 1 - Identify the Hazards: Day 1

- ✂ Review all Operating Procedures and Policies**
- ✂ Study Off Duty Environment**
- ✂ Massive Solicitation Program to Every Member**



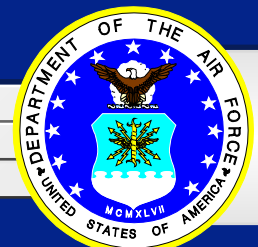
Correlated 1,000+ Inputs into 230 Hazards and 8 Categories

- ✂ **Maintenance/Flightline**
- ✂ **Flight Operations**
- ✂ **Weapons**
- ✂ **Tent City**
- ✂ **Disaster Preparedness**
- ✂ **Communications**
- ✂ **Written Procedures**
- ✂ **Combat Operations**



Step 2 - Assess Hazards

- ✂ **Severity and Probability for Occurrence**
- ✂ **Corresponding Level of Risk (Extremely High-Low)**



HAZARD IDENTIFICATION FORM

UNIT _____ RANK _____ AFSC _____

HAZARD LOCATION: _____

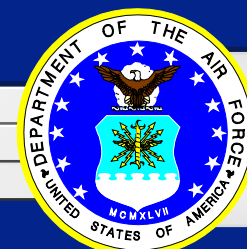
SEVERITY: _____

PROBABILITY _____

(FILL IN I, II, III, OR IV)

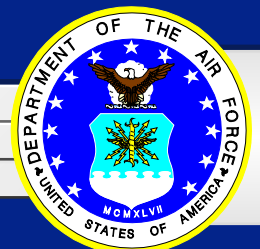
(FILL IN A, B, C, D, OR E)

		HAZARD PROBABILITY				
		FREQUENT A	LIKELY B	OCCASIONAL C	SELDOM D	UNLIKELY E
S E V E R I T Y	Catastrophic I					
	Critical II					
	Moderate III					
	Negligible IV					
		RISK LEVELS				



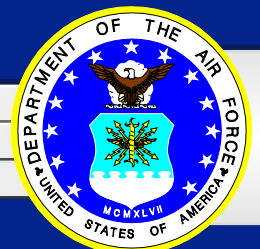
Assessment Results

- ✂ **103 “Extremely High” and 100 “High” Risk Hazards**
- ✂ **An Extremely Unsafe Environment**
- ✂ **Immediate Intervention Required**



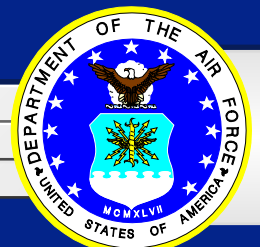
Step 3 - Develop Controls & Make Risk Acceptance Decision

- ✂ **This is a Commander's Responsibility**
- ✂ **We Held a Squadron CC Board, OG/CC as Chair**
- ✂ **Options**
 - ✂ **Eliminate**
 - ✂ **Mitigate**
 - ✂ **Accept**



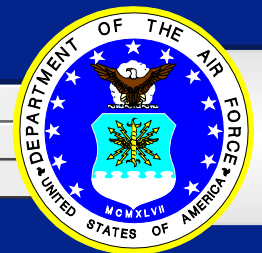
Step 4 - Implement Controls: Day 2

- ✂ Determine Control Fixes**
- ✂ Correlate Fixes into Attack Plan**
- ✂ Identify Immediate, Visible Fixes**
- ✂ Build Tracking System**



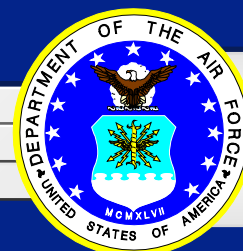
Step 5 - Supervision

- ✂ **Assign OPRs and Monitor Progress**
- ✂ **Identify/Process New Hazards**



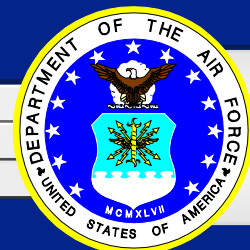
Key Factors in Risk Reduction

- ✂ **Unanimous, Enthusiastic Support/Participation**
- ✂ **Leadership's Timely and Visible Response**
- ✂ **Education, Education, Education**
- ✂ **Empowerment - "Stop the Chain"**
- ✂ **Swift and Lasting Implementation**



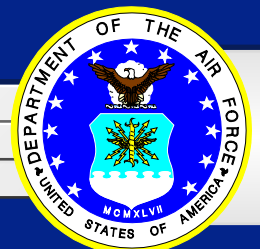
Management Results Expected

- ✂ **Real and Perceived Risk Reduction**
- ✂ **Stress Reduction**
- ✂ **Increased Capability**
- ✂ **Rapid Return to Normal Tempo**
- ✂ **Continued Vigilance**



Future Challenges

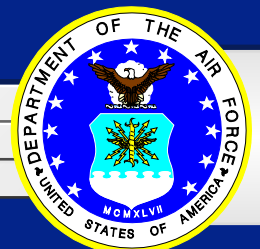
- ✂ **Maintain Lasting Vigilance**
- ✂ **Foster Initiative and Participation (Culture)**
- ✂ **Stay the Course and Manage All Risks Quarterly ORM, Until Level Lowered?**
- ✂ **Integrate ORM into all aspects of Combat Operations**



**AN EXCELLENT RESULT UNDER
DIFFICULT CIRCUMSTANCES**

BUT:

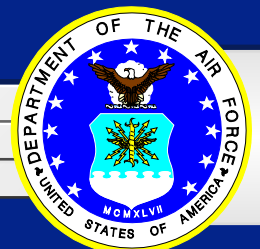
***WHAT SHOULD
HAPPEN NEXT TIME***



EARLY ORM INTEGRATION IN THE TOTAL OPERATION

✂ The proactive application of ORM

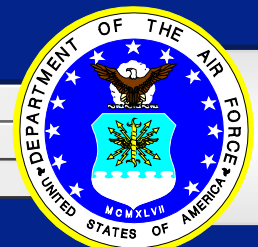
- The definition of key command wide risk issues and initiation of the 6-step process against them**
- Decentralized function-by-function command-by-command application of the 6-step process**
- Full consideration of the opportunity-risk aspect of ORM at all levels**



HOW IT MIGHT HAPPEN - A SNAPSHOT VIEW

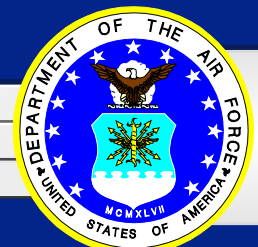
THE CE CHIEF:

- ✂ **Instructs move planners to fully integrate ORM issues**
- ✂ **Directs subordinate leaders to apply ORM within their areas**
- ✂ **Expects/demands ORM content in operational info/decision briefs/papers**
- ✂ **Establishes measures of ORM performance as part of overall Mgt process**



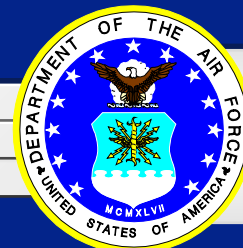
SUBORDINATE LEADERS WILL CAUSE:

- ✂ **Identification of key “at risk” issues and application of the 6-step process**
- ✂ **Application of an appropriate level of hazard ID tools to risk issues (what if, change analysis, scenario)**
- ✂ **Creation of a risk “totem pole”**



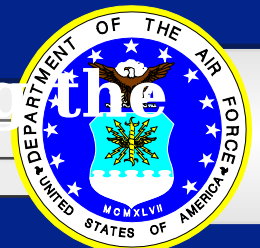
SUBORDINATE LEADERS WILL CAUSE: (cont.)

- ✂ **Prioritized development and application of both one-time and systemic risk controls. Conduct an aggressive search for risk opportunities**
- ✂ **Maximum practical positive involvement of operational personnel in the process**
- ✂ **Effective measures of risk in key activities**



THE NEW RESULT:

- **Most risks IDed and controlled before the move**
- **Real time ORM during the move keeps risks under control**
- **Opportunity-risk applications have assured maximum mission effectiveness (we took the risks we should have taken)**
- **Continuous ORM improvement is sustained at the new site**
- **Chief, CE coordinates risk issues among his subordinates and integrates CE ORM into overall organization efforts.**



COMMENTS AND QUESTIONS

